

567—69.1(455B) General.

69.1(1) Applications. These rules are applicable only to onsite wastewater treatment and disposal systems.

69.1(2) Definitions.

“Administrative authority” is the local board of health as authorized by Iowa Code section 455B.172 and 567—Chapter 137.

“Approved” means accepted or acceptable under an applicable specification stated or cited in these rules, or accepted as suitable for the proposed use by the administrative authority.

“Area drain” means a drain installed to collect surface or storm water from an open area of a building or property.

“Building drain” is that part of the lowest horizontal piping of a house drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of any building and conveys the same to the building sewer.

“Building sewer” is that part of the horizontal piping from the building wall to its connection with the main sewer or the primary treatment portion of an onsite wastewater treatment and disposal system conveying the drainage of one building site.

“Carbonaceous biochemical oxygen demand (CBOD5)” means a five-day measurement of the amount of oxygen used by microorganisms in the biochemical oxidation of organic matter.

“Chamber system” is a buried structure, typically with a domed or arched top, providing at least a six-inch height of sidewall soil exposure, creating a covered open space above a buried soil infiltrative surface.

“Class ‘A1’ water,” also referred to as a primary contact recreational use water, means waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

“Class ‘A2’ water,” also referred to as a secondary contact recreational use water, means waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.

“Class ‘A3’ water,” also referred to as a children’s recreational use water, means waters in which recreational uses by children are common. Class A3 waters are water bodies having definite banks and bed with visible evidence of the flow or occurrence of water. This type of use would primarily occur in urban or residential areas.

“Class ‘C’ water” means a “drinking water supply” river or lake, designated by the department for protection as a raw water source for a drinking water supply system.

“Conventional” when used in reference to sewage treatment means a soil absorption system involving a series of two foot wide trenches filled with gravel one foot deep, containing a four-inch diameter rigid pipe to convey the sewage effluent.

“Distribution box” is a structure designed to accomplish the equal distribution of wastewater to two or more soil absorption trenches.

“Drainage ditch” is any watercourse meeting the classification of a “general use segment” under rule 567—61.3(455B) which includes intermittent watercourses and those watercourses which typically flow only for short periods of time following precipitation in the immediate locality and whose channels are normally above the water table.

“Drip irrigation” is a form of subsurface soil absorption using shallow pressure distribution with low-pressure drip emitters.

“Drop box” is a structure to divert wastewater flow into a soil absorption trench until the trench is filled to a set level, then allow any additional waste, which is not absorbed by that trench, to flow to the next drop box or soil absorption trench.

“Dwelling” means any house or place used or intended to be used by humans as a place of residence.

“*Fill soil*” means clean soil, free of debris or large organic material, which has been mechanically moved onto a site and has been in place for less than one year.

“*Foundation drain*” means that portion of a building drainage system provided to drain groundwater from the outside of the foundation or over or under the basement floor not including any wastewater and not connected to the building drain.

“*Free access filter (open filter)*” means an intermittent sand filter constructed within the natural soil or above the ground surface with access to the distributor pipes and top of the filter media for maintenance and media replacement.

“*Gravel*” means stone screened from river sand or quarried. Concrete aggregate designated as Class II by the department of transportation is acceptable.

“*Gravelless pipe system*” means an absorption system comprised of large diameter (8 and 10 inches) corrugated plastic pipe, perforated with holes on a 120-degree arc centered on the bottom, wrapped in a sheath of geotextile filter wrap and installed level in a trench without gravel bedding or cover.

“*Individual mechanical aerobic wastewater treatment system*” means an individual wastewater treatment and disposal system employing bacterial action which is maintained by the utilization of air or oxygen and includes the aeration plant and equipment and the method of final effluent disposal.

“*Intermittent sand filters*” are beds of granular materials 24 to 36 inches deep underlain by graded gravel and collecting tile. Wastewater is applied intermittently to the surface of the bed through distribution pipes or troughs and the bed is underdrained to collect and discharge the final effluent. Uniform distribution is normally obtained by dosing so as to flood the entire surface of the bed. Filters may be designed to provide free access (open filters), or may be buried in the ground (buried filters or subsurface sand filters).

“*Lake*” means a natural or man-made impoundment of water with more than one acre of water surface area at the high water level.

“*Limiting layer*” means bedrock, seasonally high groundwater level, or any layer of soil with a stabilized percolation rate exceeding 60 minutes for the water to fall one inch.

“*Mound system*” is an alternative aboveground system used to absorb effluents from septic tanks in cases where either seasonally high water table, high bedrock conditions, slowly permeable soils or limited land areas prevent conventional subsurface absorption systems.

“*Onsite wastewater treatment and disposal system*” means all equipment and devices necessary for proper conduction, collection, storage, treatment, and disposal of wastewater from four or fewer dwelling units or other facility serving the equivalent of 15 persons (1,500 gpd) or less. This includes domestic waste whether residential or nonresidential but does not include industrial waste of any flow rate. Included within the scope of this definition are building sewers, septic tanks, subsurface absorption systems, mound systems, sand filters, constructed wetlands and individual mechanical/aerobic wastewater treatment systems.

“*Percolation test*” is a falling water level procedure used to determine the ability of soils to absorb primary treated wastewater. (See Appendix B.)

“*Pond*” means a man-made impoundment of water with a water surface area of one acre or less at the high water level.

“*Primary treatment*” is a unit or system to separate the floating and settleable solids from the wastewater before the partially treated effluent is discharged for secondary treatment.

“*Professional soil analysis*” is an alternative to the percolation test which depends upon a knowledgeable person evaluating the soil factors, such as color, texture, and structure, in order to determine an equivalent percolation rate. Demonstrated training and experience in soil morphology (testing absorption qualities of soil by the physical examination of the soil’s color, mottling, texture, structure, topography and hillslope position) shall be required to perform a professional soil analysis.

“*Qualified sampler*,” for the purposes of collecting compliance effluent samples required under NPDES General Permit No. 4, means one of the following persons: a DNR staff person, a county environmental health staff person, an Iowa-certified wastewater treatment operator, or an individual who has received training approved by the department to conduct effluent sampling.

“*Roof drain*” is a drain installed to receive water collecting on the surface of a roof and discharging into an area or storm drain system.

“*Secondary treatment system*” is a system which provides biological treatment of the effluent from septic tanks or other primary treatment units to meet minimum effluent standards as required in these rules and NPDES General Permit No. 4. Examples include soil absorption systems, sand filters, mechanical/aerobic systems, or other systems providing equivalent treatment.

“*Septage*” means the liquid contents (including sludge and scum) of a septic tank normally pumped out periodically and transported to another site for disposal.

“*Septic tank*” is a watertight structure into which wastewater is discharged for solids separation and digestion, referred to as part of the closed portion of the treatment system.

“*Sewage wastewater*” is the water-carried waste derived from ordinary living processes.

“*Sludge*” means the digested or partially digested solid material accumulated in a wastewater treatment facility.

“*Stream*” means any watercourse listed as being a “designated use segment” in rule 567—61.3(455B) which includes any watercourse which maintains flow throughout the year or contains sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community of significance.

“*Subsurface absorption system*” is a system of perforated conduits connected to a distribution system, forming a series of subsurface, water-carrying channels into which the primary treated effluent is discharged for direct absorption into the soil (referred to as part of the open portion of the treatment system).

“*Subsurface sand filter*” is a system in which the effluent from the primary treatment unit is discharged into perforated pipes, filtered through a layer of sand, and collected by lower perforated pipes for discharge to the surface or to a subsurface absorption system. A subsurface sand filter is an intermittent sand filter which is placed within the ground and provided with a natural topsoil cover over the crown of the distribution pipes.

“*Wastewater management district*” means an entity organized in accordance with permitting legislation to perform various specific functions such as planning, financing, construction, supervision, repair, maintenance, operation and management of onsite wastewater treatment and disposal systems within a designated area.

69.1(3) General regulations.

a. Connections to approved sewer system.

(1) No onsite wastewater treatment and disposal system shall be installed, repaired, or rehabilitated where a public sanitary sewer is available or where a local ordinance requires connection to a public system. The public sewer may be considered as not available when such public sewer, or any building or any exterior drainage facility connected thereto, is located more than 200 feet from any proposed building or exterior drainage facility on any lot or premises which abuts and is served by such public sewer. Final determination of availability shall be made by the administrative authority.

(2) When a public sanitary sewer becomes available within 200 feet, any building then served by an onsite wastewater treatment and disposal system shall connect to said public sanitary sewer within a time frame or under conditions set by the administrative authority.

(3) When a public sanitary sewer is not available, every building wherein persons reside, congregate or are employed shall be provided with an approved onsite wastewater treatment and disposal system.

(4) If a building is to be connected to an existing onsite wastewater treatment and disposal system, that existing system shall meet the standards of these rules and be appropriately sized.

b. Discharge restrictions. It is prohibited to discharge any wastewater from onsite wastewater treatment and disposal systems (except under an NPDES permit) to any ditch, stream, pond, lake, natural or artificial waterway, county drain tile, surface water drain tile, land drain tile or to the surface of the ground. Under no conditions shall effluent from onsite wastewater treatment and disposal systems be discharged to any abandoned well, agricultural drainage well or sinkhole. Existing discharges to

any of the above-listed locations or structures shall be eliminated by constructing a system which is in compliance with the requirements of these rules.

c. Construction or alteration. All onsite wastewater treatment and disposal systems constructed or altered after the effective date of these rules (May 13, 1998) shall comply with these requirements. Alteration includes any changes that effect the treatment or disposal of the waste. Repair of existing components that does not change the treatment or disposal would be exempt. However, the discharge restrictions in “b” above would always apply.

69.1(4) Permit required. No onsite wastewater treatment and disposal system shall be installed or altered as described in 69.1(3) “c,” until an application for a permit has been submitted and a permit has been issued by the administrative authority. The installation shall be in accordance with these rules.

69.1(5) Site analysis.

a. Site evaluation. A site evaluation shall be conducted prior to issuance of a construction permit. Consideration shall be given, but not be limited to, the impact of the following: topography; drainageways; terraces; floodplain; percent of land slope; location of property lines; location of easements; buried utilities; existing and proposed tile lines; existing, proposed and abandoned water wells; amount of available area for the installation of the system; evidence of unstable ground; alteration (cutting, filling, compacting) of existing soil profile; and soil factors determined from a soil analysis, percolation tests and soil survey maps if available.

b. Soil survey reports. During a site analysis and investigation, maximum use should be made of soil survey reports which are available from USDA Natural Resources Conservation Service. A general identification of the percolation potential can be made from soil map units in Iowa. Verification of the soil permeability on the specific site must be performed.

69.1(6) Minimum distances. All onsite wastewater treatment and disposal systems shall be located in accordance with the minimum distances shown in Table I.

TABLE I

Minimum Distance in Feet From	Closed Portion of Treatment System ⁽¹⁾	Open Portion of Treatment System ⁽²⁾
Private water supply well	50	100
Public water supply well	200	200
Groundwater heat pump borehole	50	100
Lake or reservoir	50	100
Stream or pond	25	25
Edge of drainage ditch	10	10
Dwelling or other structure	10	10
Property lines (unless a mutual easement is signed and recorded)	10	10
Other type subsurface treatment system	5	10
Water lines continually under pressure	10	10
Suction water lines	50	100
Foundation drains or subsurface tiles	10	10

⁽¹⁾Includes septic tanks, mechanical aeration tanks and impervious vault toilets.

⁽²⁾Includes subsurface absorption systems, mound systems, intermittent sand filters, constructed wetlands or waste stabilization ponds.